



The Physician's Role in Public Health Statistics and Surveillance

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For over ten years, the Rhode Island Department of Health (HEALTH) has sponsored the monthly submission of Health by Numbers to *Medicine & Health/Rhode Island*. The principal reason for this collaboration has been to offer physicians a statewide perspective of the health status of the population and the characteristics of the health care system. A second reason has been to demonstrate to physicians the capacity of HEALTH's data systems to produce statistical measures and surveillance indicators for the state's population and health care system. Both purposes are intended to support physicians in their roles as practitioners, researchers, teachers, and administrators.

Another, less explicit, purpose of Health by Numbers is of great importance to the operation of the HEALTH statistical and surveillance function. Physicians are a primary source of the information held in many of the data systems that produce health status indicators and health care statistics for the state. For some data systems, physicians themselves record and submit the data items that are entered; in others, information placed in the medical record by physicians is abstracted and entered. In both cases, the accuracy, completeness, and timeliness of the data depend on what physicians do. Health by Numbers can demonstrate the use of these data systems and provide a "feedback loop" to physicians for the data that originates with them either directly or indirectly.

As part of the "feedback loop," this report presents a brief description of physicians' roles as data sources for the key databases that support the HEALTH statistical and surveillance function.

Methods. Although the Department of Health maintains over 200 databases relating to various public health programs and functions, a subset of 30 databases have been identified as most useful for supporting the production of statewide health statistics and health surveillance indicators.¹ For this report, these databases were organized into seven categories. (Table 1) The seven categories and their descriptions are as follows:

- **Vital records** - databases consisting of registered vital events (births, deaths, and fetal deaths) and derivative databases, e.g., occupational deaths
- **Reportable conditions** - diseases or injuries reportable under state regulation, including certain infectious diseases, newly diagnosed cancers, traumatic brain injuries, etc.
- **Health care utilization** - health care encounters with certain health providers, such as inpatient hospitalizations or emergency medical service responses
- **Licensure** - information on health care facilities and professionals licensed to operate in the state
- **Health surveys** - information collected directly from samples or subsets of the population concerning health status, health behaviors, health care coverage, etc.
- **Program management information systems** - data collected in the course of providing public health services or benefits to a relatively large segment of the population
- **Composite** - information systems combining more than one of the above types of data

The physician's role in each database was characterized as either (1) direct reporting, (2) reporting through the medical record, (3) both roles, or (4) neither role. These characterizations were summarized according to the database categories above.

Results. Physicians are key reporters for 20 of the 30 specified HEALTH statistical and surveillance databases. (Table 2) In a total of 12 databases, physicians served as direct reporters; in a total of 15 databases, physicians were data sources through medical records. (For seven databases, physicians contributed in both ways; these were included in both totals.)

For four categories of databases - vital records, reportable conditions, program management information systems, and composite - physicians served as reporters for all databases. For only one category, health surveys, were physicians not at all involved as a data source. In each of the two remaining categories - health care utilization and licensure - physicians were key reporters for half of the included databases.

Table 1. HEALTH statistical and surveillance databases, by category

Vital Records
Birth Records
Census of Fatal Occupational Injuries
Death Records
Fetal Death Records
Infant Mortality and Linked Birth-Infant Death Records
Reportable Conditions
Cancer Registry
HIV/AIDS Reporting System
National Electronic Telecommunications System for Surveillance
Sexually Transmitted Diseases Surveillance
Traumatic Brain Injury Surveillance
Tuberculosis Surveillance
Health Care Utilization
Cardiac Services Registry
Emergency Medical Services Ambulance Run Reports
Health Center and Provider Office Immunization Assessments
Home Visiting Data
Hospital Discharge Data
Hospital Financial Dataset
Lead Screening Data
Minimum Data Set for Nursing Home Care
School Immunization Survey
Universal Newborn Screening
Licensure
Health Facility File
License 2000
Health Surveys
Adolescent Substance Abuse Survey
Behavioral Risk Factor Surveillance System
Health Interview Survey
Youth Risk Behavior Survey
Program Management Information Systems (MIS)
Early Intervention Program
Women, Infant, and Children (WIC) Food Supplement Program
Composite
Maternal and Child Health Data

Table 2. Physicians' roles in providing data to HEALTH statistical and surveillance databases, by category

Database Category	Physicians' Role			
	Direct Only	Medical Record Only	Both Methods	Neither Method
Vital Records	1	0	4	0
Reportable Conditions	3	1	2	0
Health Care Utilization	0	5	0	5
Licensure	1	0	0	1
Health Surveys	0	0	0	4
Program MIS	0	2	0	0
Composite	0	0	1	0
Total	5	8	7	10

Discussion. Overall, physicians are the most prolific contributors of the information that supports program operations and policy development in public health. In half of the 30 most used databases, the physician provides information through a medical record and may not be aware of his or her role as a data source. As important contributors, physicians should be aware of their roles as data sources and informed of the uses to which these data are put. As important data users, physicians should be aware as well of the opportunity to access HEALTH data to support their professional activities, including medical practice, research, teaching, and administration.

Ultimately, the quality and completeness of the information supplied by physicians impacts on the usefulness of the databases to support public health decision-making. The regular publication of analyzed health data through Health by Numbers provides physicians an opportunity to examine the fruits of their labors, as well as giving them a source of information on health status and health care in Rhode Island.

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References

1. Office of Health Statistics. *Health Data Inventory* (3rd edition). Providence: Rhode Island Department of Health. In press.

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